

09/835,504

REMARKS

Reconsideration of the application in view of the present amendment is respectfully requested.

Claims 1, 6, 10, and 14 are amended. Claims 3, 4, 5, 8, 9, 11, 13, 15-19 are canceled. Accordingly, claims 1, 2, 6, 7, 10, 12, 14, 20, and 21 are pending.

Claim 1 recites a method of determining usability of a document image. The method comprises the steps of (a) determining if a corner of a document is missing based upon captured image data associated with the document, and (b) determining if the corner of the document has a tear when the corner of the document is determined to be missing.

None of the prior art including the prior art references of record discloses or suggests a method of determining usability of a document image, wherein the method comprises the steps of (a) determining if a corner of a document is missing based upon captured image data associated with the document, and (b) determining if the corner of the document has a tear when the corner of the document is determined to be missing. Thus, claim 1 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 2 depends from claim 1 and is allowable for the reasons claim 1 is allowable and for the specific limitations recited therein. Claim 2 further recites that step (a) includes the step of (a-1) determining if at least a predetermined amount of the corner of the document is missing. None of the prior art including the prior art references of record discloses or suggests the structure recited in claim 2 in combination with the structure recited in claim 1. Thus, claim 2 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 6 recites a method of processing a document. The method comprises the steps of (a) scanning a document to capture image data which is representative of an image of the document, (b) processing at least a portion of the captured image data to calculate a first count of pixels associated with a corner of the document, (c) processing at least a portion of the captured image data to calculate a second count of pixels associated with the corner of the document, and (d) determining if the corner of the document is missing or has a tear based

09/835,504

upon the first count of pixels associated with the corner of the document and the second count of pixels associated with the corner of the document.

None of the prior art including the prior art references of record discloses or suggests a method of processing a document, wherein the method comprises the steps of (a) scanning a document to capture image data which is representative of an image of the document, (b) processing at least a portion of the captured image data to calculate a first count of pixels associated with a corner of the document, (c) processing at least a portion of the captured image data to calculate a second count of pixels associated with the corner of the document, and (d) determining if the corner of the document is missing or has a tear based upon the first count of pixels associated with the corner of the document and the second count of pixels associated with the corner of the document. Thus, claim 6 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 7 depends from claim 6 and is allowable for the reasons claim 6 is allowable and for the specific limitations recited therein. Claim 7 further recites the step of (e) determining the usability of the captured image data associated with the document based upon the amount of information found missing from the image of the document as determined in step (d). None of the prior art including the prior art references of record discloses or suggests the structure recited in claim 7 in combination with the structure recited in claim 6. Thus, claim 7 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 10 recites an apparatus for determining usability of a document image. The apparatus comprises means for determining if a corner of the document is missing based upon captured image data associated with the document, means for determining if the corner of the document has a tear when the corner of the document is determined to be missing, and means for determining the usability of the captured image data associated with the document based upon at least one of the determination as to whether the corner of the document is missing and the determination as to whether the corner of the document has a tear.

09/835,504

None of the prior art including the prior art references of record discloses or suggests an apparatus for determining usability of a document image, wherein the apparatus comprises means for determining if a corner of the document is missing based upon captured image data associated with the document, means for determining if the corner of the document has a tear when the corner of the document is determined to be missing, and means for determining the usability of the captured image data associated with the document based upon at least one of the determination as to whether the corner of the document is missing and the determination as to whether the corner of the document has a tear. Thus, claim 10 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 12 depends from claim 10 and is allowable for the reasons claim 10 is allowable and for the specific limitations recited therein. Claim 12 further recites that the means for determining if a corner of the document is missing includes means for determining if at least a predetermined amount of the corner of the document is missing. None of the prior art including the prior art references of record discloses or suggests the structure recited in claim 12 in combination with the structure recited in claim 10. Thus, claim 12 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 14 recites an apparatus comprising means for scanning a document to capture image data which is representative of an image of the document, means for processing at least a portion of the captured image data to calculate a first count of pixels associated with a corner of the document, means for processing at least a portion of the captured image data to calculate a second count of pixels associated with the corner of the document, means for determining if the corner of the document is missing or has a tear based upon the first count of pixels associated with the corner of the document and the second count of pixels associated with the corner of the document, and means for determining the usability of the captured image data associated with the document based upon the determination as to whether the corner of the document is missing or has a tear.

09/835,504

None of the prior art including the prior art references of record discloses or suggests an apparatus comprising means for scanning a document to capture image data which is representative of an image of the document; means for processing at least a portion of the captured image data to calculate a first count of pixels associated with a corner of the document, means for processing at least a portion of the captured image data to calculate a second count of pixels associated with the corner of the document, means for determining if the corner of the document is missing or has a tear based upon the first count of pixels associated with the corner of the document and the second count of pixels associated with the corner of the document, and means for determining the usability of the captured image data associated with the document based upon the determination as to whether the corner of the document is missing or has a tear. Thus, claim 14 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

Claim 20 recites a method of processing image data which is representative of an image of a document to determine usability of the document image. The method comprises the steps of (a) determining if a corner of the document is missing based upon a comparison of at least a portion of the image data with a first predetermined threshold, (b) when the corner of the document is determined to be missing, determining if the corner of the document is the result of a tear based upon a comparison of at least a portion of the image data with a second predetermined threshold, and (c) when the missing corner is determined to be the result of a tear, determining again if the corner of the document is missing based upon a comparison of at least a portion of the image data with a third predetermined threshold which is different from the first predetermined threshold.

None of the prior art including the prior art references of record discloses or suggests a method of processing image data which is representative of an image of a document to determine usability of the document image, wherein the method comprises the steps of (a) determining if a corner of the document is missing based upon a comparison of at least a portion of the image data with a first predetermined threshold, (b) when the corner of the document is determined to be missing, determining if the corner of the document is the result

09/835,504

of a tear based upon a comparison of at least a portion of the image data with a second predetermined threshold, and (c) when the missing corner is determined to be the result of a tear, determining again if the corner of the document is missing based upon a comparison of at least a portion of the image data with a third predetermined threshold which is different from the first predetermined threshold. Thus, claim 20 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

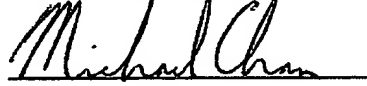
Claim 21 recites a computerized method of processing image data which is representative of an image of a document to determine usability of the document image. The computerized method comprises the steps of (a) processing the image data to determine if a missing corner of the document in the document image is the result of a tear in the document, and (b) concluding that the missing corner of the document in the document image is the result of a fold in the document when the missing corner is unable to be determined to be the result of a tear in the document.

None of the prior art including the prior art references of record discloses or suggests a computerized method of processing image data which is representative of an image of a document to determine usability of the document image, wherein the computerized method comprises the steps of (a) processing the image data to determine if a missing corner of the document in the document image is the result of a tear in the document, and (b) concluding that the missing corner of the document in the document image is the result of a fold in the document when the missing corner is unable to be determined to be the result of a tear in the document. Thus, claim 21 patentably defines over the prior art including the prior art references of record, whether taken singularly or in combination, and is therefore allowable.

09/835,504

In view of the foregoing, it is submitted that the application is in condition for allowance, and allowance of the application is respectfully requested.

Respectfully submitted,



Michael Chan
Reg. No. 33,663
Attorney for Applicant

NCR Corporation, Law Department, WHQ4
1700 S. Patterson Blvd., Dayton, OH 45479-0001
Tel. No. 937-445-4956/Fax No. 937-445-3733

MAY 10 2004